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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/520,146

10/19/2005

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EXAMINER

HEINCER, LIAM J

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/520,146	Applicant(s) HANSEN ET AL.	
	Examiner Liam J. Heincer	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17, 19 and 21-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17, 19, and 21-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 17, 19, 21 and 25-37 are rejected under 35 U.S.C. 102(e) as being anticipated by Hansen et al. (US Pat. 6,730,730).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Considering Claims 17, 19, 21, and 37: Hansen et al. teaches a formaldehyde free (1:19-25) aqueous (2:20-23) binder composition (1:10-17) comprising a binder component obtainable from the reaction of an alkanolamine (claim 7) and a carboxylic anhydride (1:39-44); and a carbohydrate (claim 24). Hansen et al. teaches a ratio of

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diethanol amine to the anhydride as being 1:1 or 1:1.4 is specific examples (example 1). As diethanolamine has 2 hydroxyl groups and one amine (NH+OH) is 3. The anhydrides have 2 carboxyl groups. Therefore the ratio of amine and hydroxyl groups to carboxyl groups is 1.5:1 or 1.1:1 respectively.

Considering Claims 25, 26, 29, and 30: Hansen et al. teaches binders comprising a mixture of tetrahydrophthalic anhydride and phthalic anhydride or trimellitic anhydride (example 1, binders 2 and 3).

Considering Claims 27 and 28: Hansen et al. teaches the molar ratio of cycloaliphatic anhydride to aromatic anhydride as being 0.75 to 1.3 (example 1, binder 2).

Considering Claim 31: Hansen et al. teaches the alkanolamine as being diethanolamine, 3-amino-1,2-propanediol, or 2-amino-1,3-propanediol (claim 7).

Considering Claims 32 and 33: Hansen et al. teaches the carbohydrate as being sucrose, glucose syrup or modified starch (claim 24).

Considering Claim 34: Hansen et al. teaches adding a curing accelerator to the binder (3:57-61).

Considering Claims 35 and 36: Hansen et al. teaches a mineral fiber product made by contacting fibers with the binder and curing the binder (claim 26).

Claims 17, 19, 21 and 25-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Hansen et al. (WO 01/05725).

Considering Claims 17, 19, 21, and 37: Hansen et al. teaches a formaldehyde free (1:10-16) aqueous (3:1-2) binder composition (1:1-9) comprising a binder component obtainable from the reaction of an alkanolamine (claim 6) and a carboxylic anhydride (1:28-2:2); and a carbohydrate (claim 10). Hansen et al. teaches a ratio of diethanol amine to the anhydride as being 1:1 or 1:1.4 is specific examples (example 1). As diethanolamine has 2 hydroxyl groups and one amine (NH+OH) is 3. The anhydrides have 2 carboxyl groups. Therefore the ratio of amine and hydroxyl groups to carboxyl groups is 1.5:1 or 1.1:1 respectively

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Considering Claims 25, 26, 29, and 30: Hansen et al. teaches binders comprising a mixture of tetrahydrophthalic anhydride and phthalic anhydride or trimellitic anhydride (example 1, binders 2 and 3).

Considering Claims 27 and 28: Hansen et al. teaches the molar ratio of cycloaliphatic anhydride to aromatic anhydride as being 0.75 to 1.3 (example 1, binder 2).

Considering Claim 31: Hansen et al. teaches the alkanolamine as being diethanolamine, 3-amino-1,2-propanediol, or 2-amino-1,3-propanediol (claim 6).

Considering Claims 32 and 33: Hansen et al. teaches the carbohydrate as being sucros, glucose syrup or modified starch (claim 10).

Considering Claim 34: Hansen et al. teaches adding a curing accelerator to the binder (8:27-30).

Considering Claims 35 and 36: Hansen et al. teaches a mineral fiber product made by contacting fibers with the binder and curing the binder (claim 13).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al. (WO 01/05725) as applied to claim 18 above, and further in view of Hummerich et al. (US. Pat. 6,071,994).

Considering Claims 22-24: Hansen et al. teaches the binder of claim 18 as shown above.

Hansen et al. does not teach the starch being added in the claimed amount. However, Hummerich et al. teaches adding starch to a formaldehyde free binder comprising an acid anhydride and an alkanolamine in an amount of 20% by weight (7:5-19). Hansen et al. and Hummerich et al. are combinable as they are concerned with the same field of endeavor, namely formaldehyde free aqueous binders comprising alkanolamines and acid anhydrides. It would have been obvious to a person having ordinary skill in the art at the time of invention to have added the carbohydrate of Hansen et al. in the amount of Hummerich et al., and the motivation to do so would have been, as Hummerich et al. suggests, it will prevent the resin from precipitating in the solution (7:5-19).

Response to Amendment

The declaration under 37 CFR 1.132 filed October 21, 2008 is insufficient to overcome the rejection of claims 17-36 based upon Hansen et al. as set forth in the last Office action because: The rejection was made under 35 U.S.C. 102. Evidence of secondary considerations, such as unexpected results or commercial success, is irrelevant to 35 U.S.C. 102 rejections and thus cannot overcome a rejection so based. *In re Wiggins*, 488 F.2d 538, 543, 179 USPQ 421, 425 (CCPA 1973). See MPEP 2131.04.

Response to Arguments

Applicant's arguments filed October 21, 2008 have been fully considered but they are not persuasive, because:

A) Applicant's argument that Hansen et al. does not appreciate that controlling the ratio of amine and hydroxy groups to carboxy groups is not persuasive. "[W]hen, as

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by a recitation of ranges or otherwise, a claim covers several compositions, the claim is 'anticipated' if *one* of them is in the prior art." *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). See MPEP §2131.03. While Hansen et al. does not teach that the altering the ranges will result in superior results, Hansen et al. does teach specific examples that fall within the range as shown above. Therefore the range is anticipated.

B) Applicants argument that the Hansen et al. does not use a carbohydrate in the working examples is not persuasive. A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), *cert. denied*, 493 U.S. 975 (1989). See MPEP §2123. Additionally, the fact that the polysaccharide is claimed in each of the Hansen et al. applications would lead a person having ordinary skill in the art at the time of invention to the conclusion that the inclusion of polysaccharides in the binder is in fact a preferred embodiment.

C) Applicants argument of unexpected results is not persuasive. The rejection was made under 35 U.S.C. 102. Evidence of secondary considerations, such as unexpected results or commercial success, is irrelevant to 35 U.S.C. 102 rejections and thus cannot overcome a rejection so based. *In re Wiggins*, 488 F.2d 538, 543, 179 USPQ 421, 425 (CCPA 1973). See MPEP 2131.04.

Additionally, to establish unexpected results over a claimed range, applicants should compare a sufficient number of tests both inside and outside the claimed range to show the criticality of the claimed range. *In re Hill*, 284 F.2d 955, 128 USPQ 197 (CCPA 1960). See MPEP §716.02 (d). The declaration of October 21, 2008 only provides examples using the claimed ratio of amine and hydroxyl groups to carboxy groups. There are no examples shown outside the claimed range.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Liam J. Heincer whose telephone number is 571-270-3297. The examiner can normally be reached on Monday thru Friday 7:30 to 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/

LJH

Supervisory Patent Examiner, Art Unit 1796

December 30, 2008